

# **Technofert Demo Trial Bozyazi – Mersin 2009-2010**

**Prepared by:**

**Market Development Department  
Doktor Tarsa / Turkey**

**Farmer Name** : **Mehmet Meteris**  
**Plant** : **Banana**  
**Trial Area** : **0,1 ha**  
**Control Plot** : **0,1 ha**  
**Variety** : **Musa Cavendishi**  
**Plant Density** : **1.800 plant/ha**  
**Water Source** : **Well**



| CULTIVATION PERIOD (MONTH) | Day       | FERTILIZER         | App. Time | Kg/ Ha | Dosage       | NUTRIENTS    |                               |                  |             |             |             |            |            |            |            |            |            |  |
|----------------------------|-----------|--------------------|-----------|--------|--------------|--------------|-------------------------------|------------------|-------------|-------------|-------------|------------|------------|------------|------------|------------|------------|--|
|                            |           |                    |           |        |              | Kg/ Ha       |                               |                  |             |             |             |            |            |            |            |            |            |  |
|                            |           |                    |           |        |              | N            | P <sub>2</sub> O <sub>5</sub> | K <sub>2</sub> O | S           | CaO         | MgO         | Fe         | Cu         | Zn         | Mn         | Mo         | B          |  |
| April                      | 30 - 60   | X brand 10-52-10   | 4         | 20     | 80           | 8,0          | 41,6                          | 8,0              |             |             |             | 0,120      | 0,012      | 0,024      | 0,024      | 0,001      | 0,008      |  |
|                            |           | X brand 20-20-20   | 4         | 10     | 40           | 8,0          | 8,0                           | 8,0              |             |             |             | 0,060      | 0,006      | 0,012      | 0,012      | 0,000      | 0,004      |  |
|                            |           | CALMAG             | 4         | 10     | 40           | 5,6          |                               |                  |             | 7           | 2,6         |            |            |            |            |            |            |  |
|                            |           | Docto Zinc         | 1         | 3      | 3,0          |              |                               |                  |             |             |             |            |            | 0,45       |            |            |            |  |
| May                        | 60 - 90   | X brand 10-52-10   | 4         | 10     | 40           | 4,0          | 20,8                          | 4,0              |             |             |             | 0,060      | 0,006      | 0,012      | 0,012      | 0,000      | 0,004      |  |
|                            |           | X brand 20-20-20   | 4         | 25     | 100          | 20,0         | 20,0                          | 20,0             |             |             |             | 0,150      | 0,015      | 0,030      | 0,030      | 0,001      | 0,010      |  |
|                            |           | Ammonium Nitrate   | 4         | 15     | 60           | 19,8         |                               |                  |             |             |             |            |            |            |            |            |            |  |
|                            |           | CALMAG             | 4         | 10     | 40           | 5,6          |                               |                  |             | 7           | 2,6         |            |            |            |            |            |            |  |
|                            |           | Docto Zinc         | 1         | 2      | 2,0          |              |                               |                  |             |             |             |            |            | 0,3        |            |            |            |  |
| June                       | 90 - 120  | X brand 20-20-20   | 4         | 19     | 76           | 15,2         | 15,2                          | 15,2             |             |             |             | 0,114      | 0,011      | 0,023      | 0,023      | 0,001      | 0,008      |  |
|                            |           | X brand 15-10-30   | 4         | 30     | 120          | 18,0         | 12,0                          | 36,0             |             |             |             | 0,180      | 0,018      | 0,036      | 0,036      | 0,001      | 0,012      |  |
|                            |           | Ammonium Nitrate   | 4         | 12     | 48           | 15,8         |                               |                  |             |             |             |            |            |            |            |            |            |  |
|                            |           | CALMAG             | 4         | 10     | 40           | 5,6          |                               |                  |             | 7           | 2,6         |            |            |            |            |            |            |  |
|                            |           | Potassium Sulphate | 4         | 18     | 72           |              |                               | 36,7             | 13,0        |             |             |            |            |            |            |            |            |  |
| July                       | 120 - 150 | X brand 20-20-20   | 4         | 25     | 100          | 20,0         | 20,0                          | 20,0             |             |             |             | 0,150      | 0,015      | 0,030      | 0,030      | 0,001      | 0,010      |  |
|                            |           | X brand 15-10-30   | 4         | 40     | 160          | 24,0         | 16,0                          | 48,0             |             |             |             | 0,240      | 0,024      | 0,048      | 0,048      | 0,002      | 0,016      |  |
|                            |           | Ammonium Nitrate   | 4         | 10     | 40           | 13,2         |                               |                  |             |             |             |            |            |            |            |            |            |  |
|                            |           | CALMAG             | 4         | 10     | 40           | 5,6          |                               |                  |             | 7           | 2,6         |            |            |            |            |            |            |  |
|                            |           | Hydroponica        | 4         | 15     | 60           | 8,1          |                               | 27,3             |             |             |             |            |            |            |            |            |            |  |
| August                     | 150 - 180 | X brand 20-20-20   | 4         | 25     | 100          | 20,0         | 20,0                          | 20,0             |             |             |             | 0,150      | 0,015      | 0,030      | 0,030      | 0,001      | 0,010      |  |
|                            |           | X brand 15-10-30   | 4         | 50     | 200          | 30,0         | 20,0                          | 60,0             |             |             |             | 0,300      | 0,030      | 0,060      | 0,060      | 0,002      | 0,020      |  |
|                            |           | Ammonium Nitrate   | 4         | 10     | 40           | 13,2         |                               |                  |             |             |             |            |            |            |            |            |            |  |
|                            |           | CALMAG             | 4         | 10     | 40           | 5,6          |                               |                  |             | 7           | 2,6         |            |            |            |            |            |            |  |
|                            |           | Potassium Sulphate | 4         | 30     | 120          |              |                               | 61,2             | 21,6        |             |             |            |            |            |            |            |            |  |
| September                  | 180 - 210 | X brand 15-10-30   | 4         | 60     | 240          | 36,0         | 24,0                          | 72,0             |             |             |             | 0,360      | 0,036      | 0,072      | 0,072      | 0,002      | 0,024      |  |
|                            |           | Ammonium Nitrate   | 4         | 10     | 40           | 13,2         |                               |                  |             |             |             |            |            |            |            |            |            |  |
|                            |           | CALMAG             | 4         | 10     | 40           | 5,6          |                               |                  |             | 7           | 2,6         |            |            |            |            |            |            |  |
|                            |           | Hydroponica        | 4         | 35     | 140          | 18,9         |                               | 63,7             |             |             |             |            |            |            |            |            |            |  |
| <b>TOTAL FERTILIZING</b>   |           |                    |           |        | <b>2.121</b> | <b>339,0</b> | <b>217,6</b>                  | <b>500,1</b>     | <b>34,6</b> | <b>42,0</b> | <b>15,6</b> | <b>1,9</b> | <b>0,2</b> | <b>1,1</b> | <b>0,4</b> | <b>0,0</b> | <b>0,1</b> |  |

\* X brand is a well known brand in the market.

TOTAL FOLIAR FERTILIZERS BY DRT

| CULTIVATION PERIOD (MONTH) | Day       | FERTILIZER                 | App. Time | Kg/Ha | Dosage       | NUTRIENTS    |                               |                  |            |             |             |            |            |            |            |            |            |  |
|----------------------------|-----------|----------------------------|-----------|-------|--------------|--------------|-------------------------------|------------------|------------|-------------|-------------|------------|------------|------------|------------|------------|------------|--|
|                            |           |                            |           |       |              | Kg/Ha        |                               |                  |            |             |             |            |            |            |            |            |            |  |
|                            |           |                            |           |       |              | N            | P <sub>2</sub> O <sub>5</sub> | K <sub>2</sub> O | S          | CaO         | MgO         | Fe         | Cu         | Zn         | Mn         | Mo         | B          |  |
| April                      | 30 - 60   | <b>Technofert 10-38-17</b> | 4         | 30    | 120          | 12,0         | 45,6                          | 20,4             |            |             |             | 0,180      | 0,018      | 0,036      | 0,036      | 0,001      | 0,012      |  |
|                            |           | <b>Technofert 18-17-21</b> | 4         | 10    | 40           | 7,2          | 6,8                           | 8,4              |            |             |             | 0,060      | 0,006      | 0,012      | 0,012      | 0,000      | 0,004      |  |
|                            |           | CALMAG                     | 4         | 10    | 40           | 5,6          |                               |                  |            | 7           | 2,6         |            |            |            |            |            |            |  |
|                            |           | Docto Zinc                 | 1         | 3     | 3,0          |              |                               |                  |            |             |             |            |            | 0,45       |            |            |            |  |
| May                        | 60 - 90   | <b>Technofert 10-38-17</b> | 4         | 10    | 40           | 4,0          | 15,2                          | 6,8              |            |             |             | 0,060      | 0,006      | 0,012      | 0,012      | 0,000      | 0,004      |  |
|                            |           | <b>Technofert 18-17-21</b> | 4         | 30    | 120          | 21,6         | 20,4                          | 25,2             |            |             |             | 0,180      | 0,018      | 0,036      | 0,036      | 0,001      | 0,012      |  |
|                            |           | Ammonium Nitrate           | 4         | 10    | 40           | 13,2         |                               |                  |            |             |             |            |            |            |            |            |            |  |
|                            |           | CALMAG                     | 4         | 10    | 40           | 5,6          |                               |                  |            | 7           | 2,6         |            |            |            |            |            |            |  |
|                            |           | Docto Zinc                 | 1         | 2     | 2,0          |              |                               |                  |            |             |             |            |            | 0,3        |            |            |            |  |
| June                       | 90 - 120  | <b>Technofert 18-17-21</b> | 4         | 30    | 120          | 21,6         | 20,4                          | 25,2             |            |             |             | 0,180      | 0,018      | 0,036      | 0,036      | 0,001      | 0,012      |  |
|                            |           | <b>Technofert 14-13-30</b> | 4         | 20    | 80           | 11,2         | 10,4                          | 24,0             |            |             |             | 0,120      | 0,012      | 0,024      | 0,024      | 0,001      | 0,008      |  |
|                            |           | Ammonium Nitrate           | 4         | 10    | 40           | 13,2         |                               |                  |            |             |             |            |            |            |            |            |            |  |
|                            |           | CALMAG                     | 4         | 10    | 40           | 5,6          |                               |                  |            | 7           | 2,6         |            |            |            |            |            |            |  |
|                            |           | Hydroponica                | 4         | 10    | 40           | 5,4          |                               | 18,2             |            |             |             |            |            |            |            |            |            |  |
| July                       | 120 - 150 | <b>Technofert 18-17-21</b> | 4         | 20    | 80           | 14,4         | 13,6                          | 16,8             |            |             |             | 0,120      | 0,012      | 0,024      | 0,024      | 0,001      | 0,008      |  |
|                            |           | <b>Technofert 14-13-30</b> | 4         | 40    | 160          | 22,4         | 20,8                          | 48,0             |            |             |             | 0,240      | 0,024      | 0,048      | 0,048      | 0,002      | 0,016      |  |
|                            |           | Ammonium Nitrate           | 4         | 10    | 40           | 13,2         |                               |                  |            |             |             |            |            |            |            |            |            |  |
|                            |           | CALMAG                     | 4         | 10    | 40           | 5,6          |                               |                  |            | 7           | 2,6         |            |            |            |            |            |            |  |
|                            |           | Hydroponica                | 4         | 20    | 80           | 10,8         |                               | 36,4             |            |             |             |            |            |            |            |            |            |  |
| August                     | 150 - 180 | <b>Technofert 18-17-21</b> | 4         | 15    | 60           | 10,8         | 10,2                          | 12,6             |            |             |             | 0,090      | 0,009      | 0,018      | 0,018      | 0,001      | 0,006      |  |
|                            |           | <b>Technofert 14-13-30</b> | 4         | 50    | 200          | 28,0         | 26,0                          | 60,0             |            |             |             | 0,300      | 0,030      | 0,060      | 0,060      | 0,002      | 0,020      |  |
|                            |           | Ammonium Nitrate           | 4         | 10    | 40           | 13,2         |                               |                  |            |             |             |            |            |            |            |            |            |  |
|                            |           | CALMAG                     | 4         | 10    | 40           | 5,6          |                               |                  |            | 7           | 2,6         |            |            |            |            |            |            |  |
|                            |           | Hydroponica                | 4         | 30    | 120          | 16,2         |                               | 54,6             |            |             |             |            |            |            |            |            |            |  |
| September                  | 180 - 210 | <b>Technofert 14-13-30</b> | 4         | 60    | 240          | 33,6         | 31,2                          | 72,0             |            |             |             | 0,360      | 0,036      | 0,072      | 0,072      | 0,002      | 0,024      |  |
|                            |           | Ammonium Nitrate           | 4         | 10    | 40           | 13,2         |                               |                  |            |             |             |            |            |            |            |            |            |  |
|                            |           | CALMAG                     | 4         | 10    | 40           | 5,6          |                               |                  |            | 7           | 2,6         |            |            |            |            |            |            |  |
|                            |           | Hydroponica                | 4         | 40    | 160          | 21,6         |                               | 72,8             |            |             |             |            |            |            |            |            |            |  |
| <b>TOTAL FERTILIZING</b>   |           |                            |           |       | <b>2.105</b> | <b>340,4</b> | <b>220,6</b>                  | <b>501,4</b>     | <b>0,0</b> | <b>42,0</b> | <b>15,6</b> | <b>1,9</b> | <b>0,2</b> | <b>1,1</b> | <b>0,4</b> | <b>0,0</b> | <b>0,1</b> |  |

# COMPARISON OF TOTAL FERTILIZERS

|                                 |              | N     | P <sub>2</sub> O <sub>5</sub> | K <sub>2</sub> O | S    | CaO  | MgO  | Fe  | Cu  | Zn  | Mn  | Mo  | B   |
|---------------------------------|--------------|-------|-------------------------------|------------------|------|------|------|-----|-----|-----|-----|-----|-----|
| <b>TOTAL FARMER FERTILIZING</b> | <b>2.121</b> | 339,0 | 217,6                         | 500,1            | 34,6 | 42,0 | 15,6 | 1,9 | 0,2 | 1,1 | 0,4 | 0,0 | 0,1 |
| <b>TOTAL DRT FERTILIZING</b>    | <b>2.105</b> | 340,4 | 220,6                         | 501,4            | 0,0  | 42,0 | 15,6 | 1,9 | 0,2 | 1,1 | 0,4 | 0,0 | 0,1 |

- At this trial two different fertilizers applied to each side, but straight fertilizers amount kept approximately the same. In this way difference between fertilizers can be observed clearly.



# Technofert Trial – 12.05.2010



**CONTROL**



 **technofert**





**CONTROL**



 **technofert**





**CONTROL**

 **technofert**







**CONTROL**



 **technofert**





**CONTROL**



 **technofert**





**CONTROL**



# Technofert Trial – 30.09.2010

103 cm



**CONTROL**

111 cm



 **technofert**



16 cm



19 cm



**CONTROL**



technofert<sup>®</sup>



**CONTROL**





**CONTROL**



 **technofert**<sup>®</sup>



**CONTROL**





# Benefit & Cost (\$)

|                              | Unit          | Farmer           | DRT&SQM                   | Difference      |
|------------------------------|---------------|------------------|---------------------------|-----------------|
| <b>Total Fertilizer Cost</b> | <b>\$/ha</b>  | <b>7459,33</b>   | <b>5116,66</b>            | <b>-2342,67</b> |
| <b>Yield</b>                 | <b>Ton/ha</b> | <b>48,5</b>      | <b>55,0</b>               | <b>6,5</b>      |
| <b>Price</b>                 | <b>\$/Ton</b> | <b>900,0</b>     | <b>900,0</b>              | <b>0</b>        |
| <b>Gross Income</b>          | <b>\$/ha</b>  | <b>43.650</b>    | <b>49.500</b>             | <b>5.850</b>    |
| <b>Net Income</b>            | <b>\$/ha</b>  | <b>36.190,67</b> | <b>44.383,34</b>          | <b>8.192,67</b> |
|                              |               |                  | <b>Increase in Income</b> | <b>23%</b>      |
|                              |               |                  | <b>Increase in Yield</b>  | <b>13%</b>      |

\$ = 1,5 YTL

- ★ In this trial there are clear differences between the side with Technofert and without.
- ★ Plant growth, leaf development and inflorescence emergence was better at Technofert applied side. Differences became more clear after inflorescence emerge.
- ★ Fruit ripening was better and number of hands slightly more at Technofert applied side. Earliness observed on fruits at Technofert applied side. Fruit density was generally better with Technofert.
- ★ At this trial farmer made 12.290 TL more profit from hectare with using Technofert and 13% yield increased.





“It is a fertilizer can be used at banana without hesitation” said by Mehmet Meteris.

